

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (Currently Amended) A dual polarized antenna comprising:

at least first and second substantially planar Vivaldi antenna elements; and

antenna element [fees;] feeds; wherein,

the antenna elements have active portions for receiving or radiating signals from a direction forward of the antenna;

the antenna elements have mutually intersecting planes;

phase centers of the active portions of the antenna elements are substantially collocated;

the antenna element feeds are coupled to the respective antenna elements, and extend to the respective antenna elements from a position that is i) rearward of the active portions, and ii) displaced from an axis extending through the phase centers and the intersection of the planes of the antennas; and

each antenna element has a feed flare and an end flare, with a substantially constant slot section disposed therebetween.

Claim 2. (Previously Presented) An antenna as claimed in claim 1, further comprising an antenna feedline connected to the antenna element feeds at the position displaced from the axis.

Claim 3. (Original) An antenna as claimed in claim 2 wherein the antenna feedline crosses the axis.

Claim 4. (Original) An antenna as claimed in claim 3 wherein the antenna feedline comprises a stripline section and a twinline section.

Claims 5.-6. (Cancelled)

Claim 7. (Original) An antenna as claimed in claim 1 wherein the feedline includes a parallel section substantially parallel to the axis.

Claim 8. (Original) An antenna as claimed in claim 7 wherein the parallel section of the first element has substantially the same length as the constant slot section of the other element.

Claim 9. (Previously Presented) An antenna as claimed in claim 1 wherein the locus of effective phase centers of the elements are co-located.

Claim 10. (Original) An antenna as claimed in claim 1 wherein the antenna elements are joined by mutually engaging formations.

Claim 11. (Original) An antenna as claimed in claim 10 wherein the mutually engaging formations include slots made in the elements.

Claim 12. (Previously Presented) An antenna as claimed in claim 11 wherein the elements are formed by substrates and metallized layers.

Claim 13. (Original) An antenna as claimed in claim 1 wherein the first and the second elements have substantially matching end flares.

Claim 14. (Previously Presented) Radiowave receiving apparatus having an antenna, comprising:

at least first and second substantially planar Vivaldi antenna elements; and

antenna element feeds, wherein,

the antenna elements have active portions for receiving or radiating signals from a direction forward of the antenna;

the antenna elements have mutually intersecting planes;

phase centers of the active portions of the antenna elements are substantially collocated;

the antenna element feeds are coupled to the respective antenna elements, and extend to the respective antenna elements from a position that is

i) rearward of the active portions, and ii) displaced from an axis extending through the phase centers and the intersection of the planes of the antennas; and

each antenna element has a feed flare and an end flare, with a substantially constant slot section disposed therebetween.

Claim 15. (Previously Presented) Radiowave transmitting apparatus having an antenna, comprising:

at least first and second substantially planar Vivaldi antenna elements; and

antenna element feeds; wherein,

the antenna elements have active portions for receiving or radiating signals from a direction forward of the antenna;

the antenna elements have mutually intersecting planes;

phase centers of the active portions of the antenna elements are substantially collocated;

the antenna element feeds are coupled to the respective antenna elements, and extend to the respective antenna elements from a position that is i) rearward of the active portions, and ii) displaced from an axis extending through the phase centers and the intersection of the planes of the antennas; and

each antenna element has a feed flare and an end flare, with a substantially constant slot section disposed therebetween.